

FIG. 1

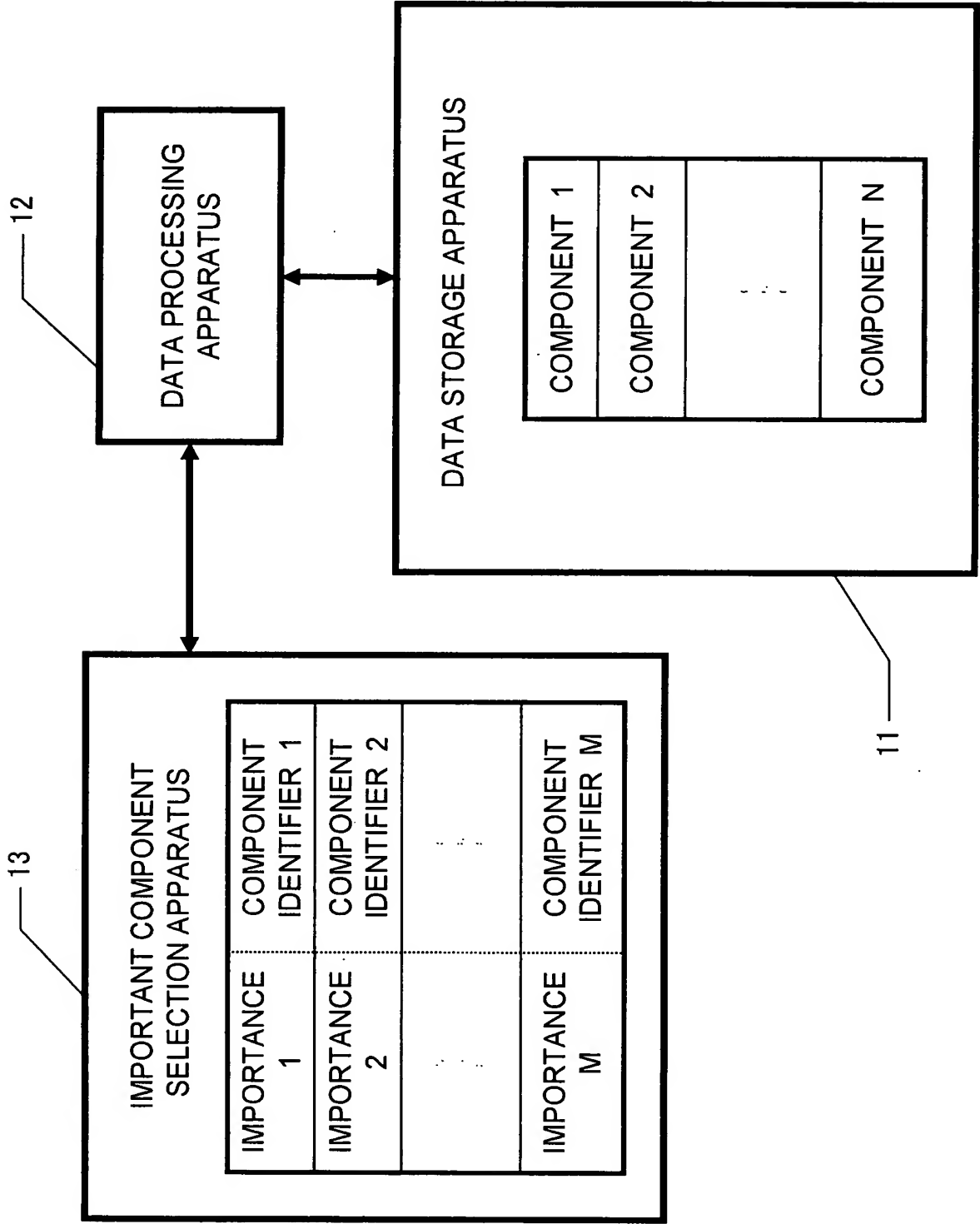


FIG. 2

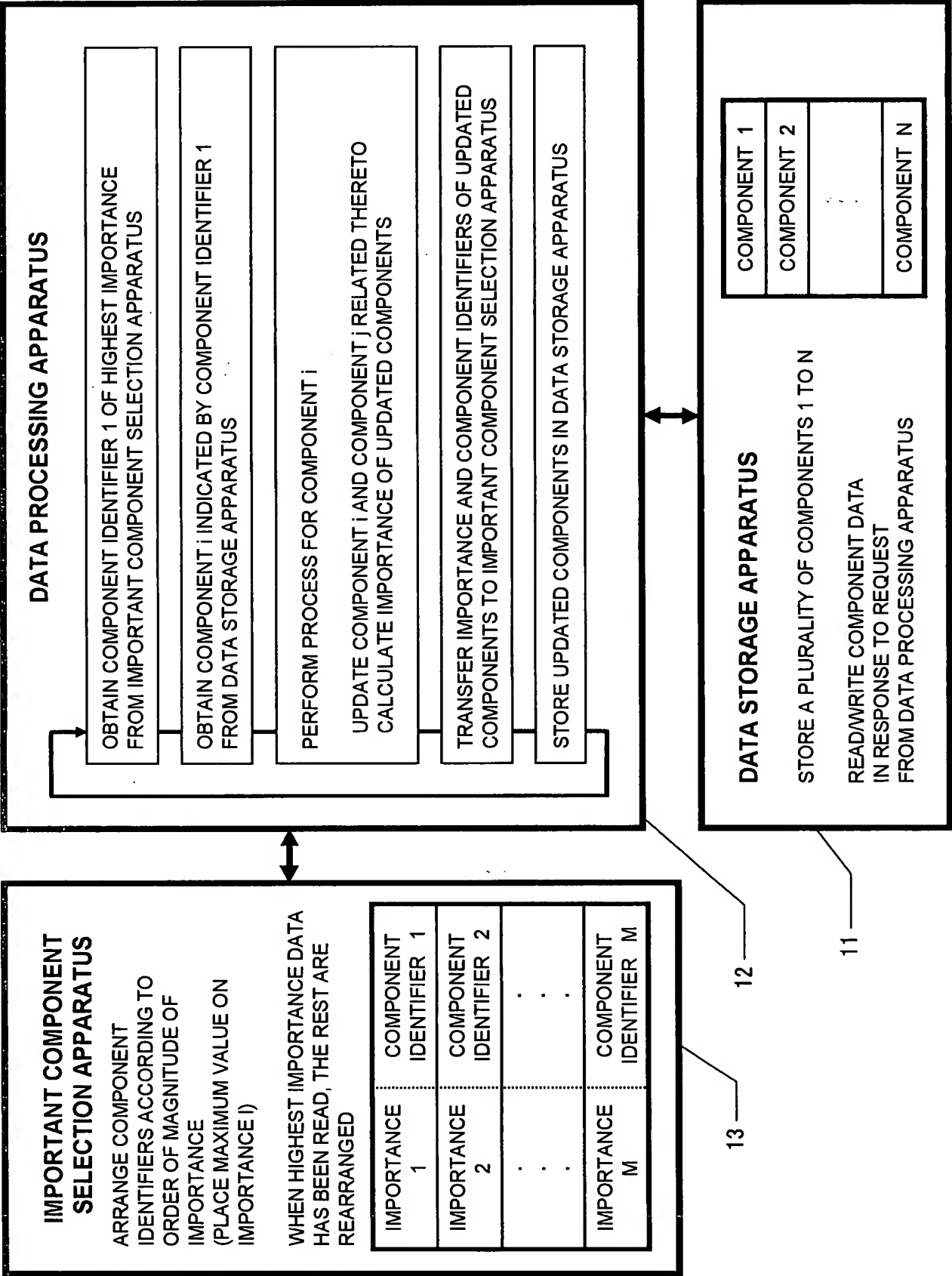


FIG. 3

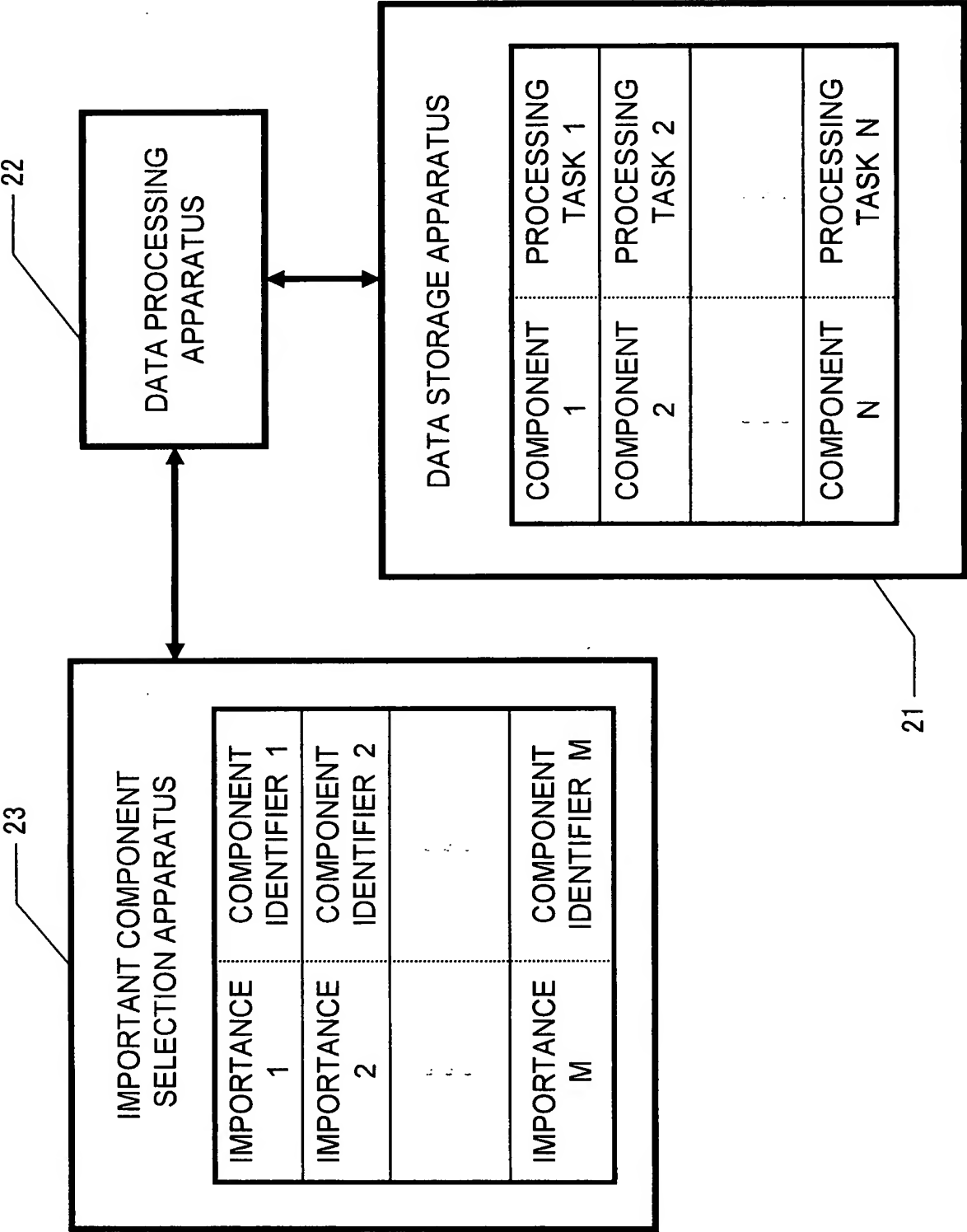


FIG. 4

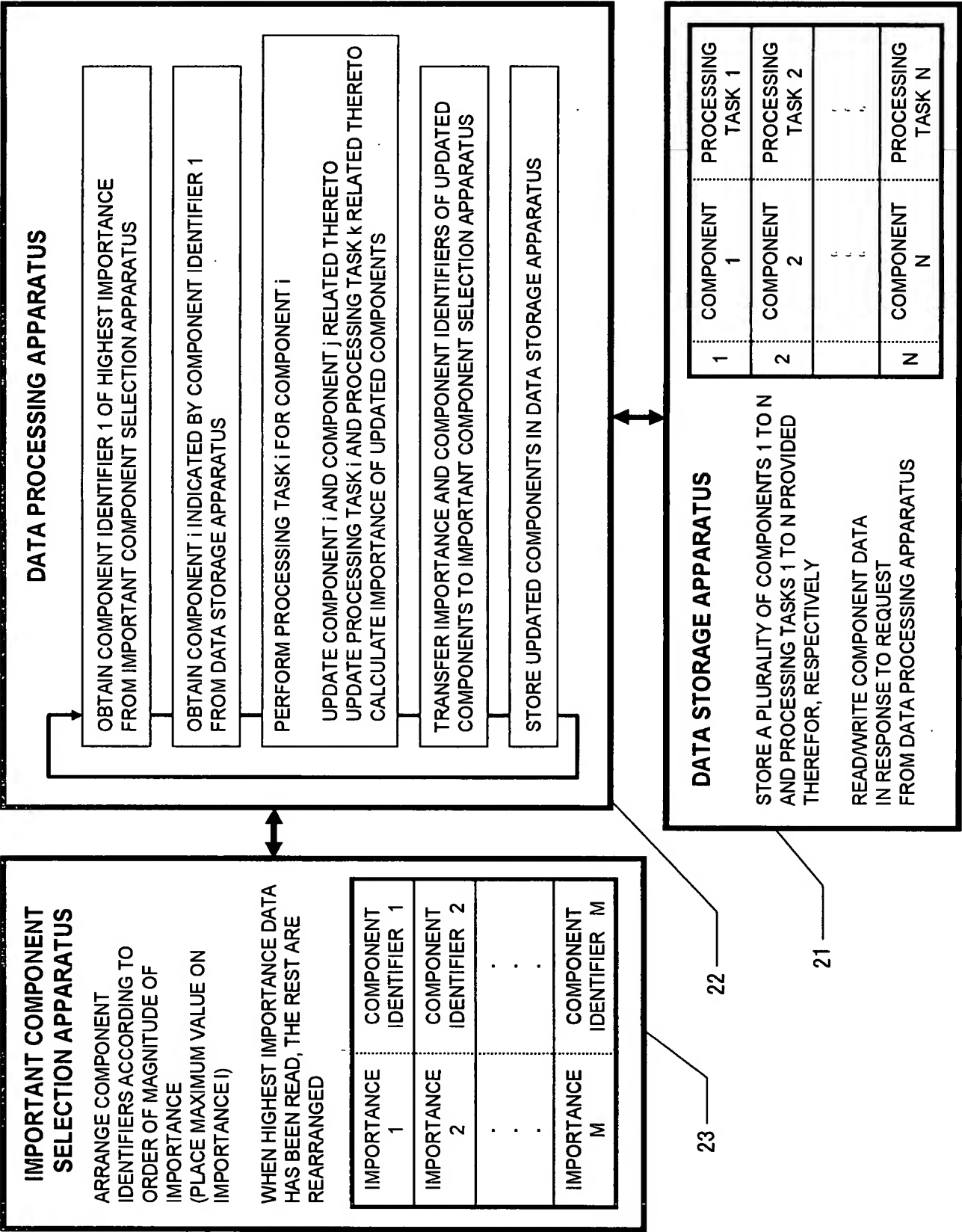


FIG. 5

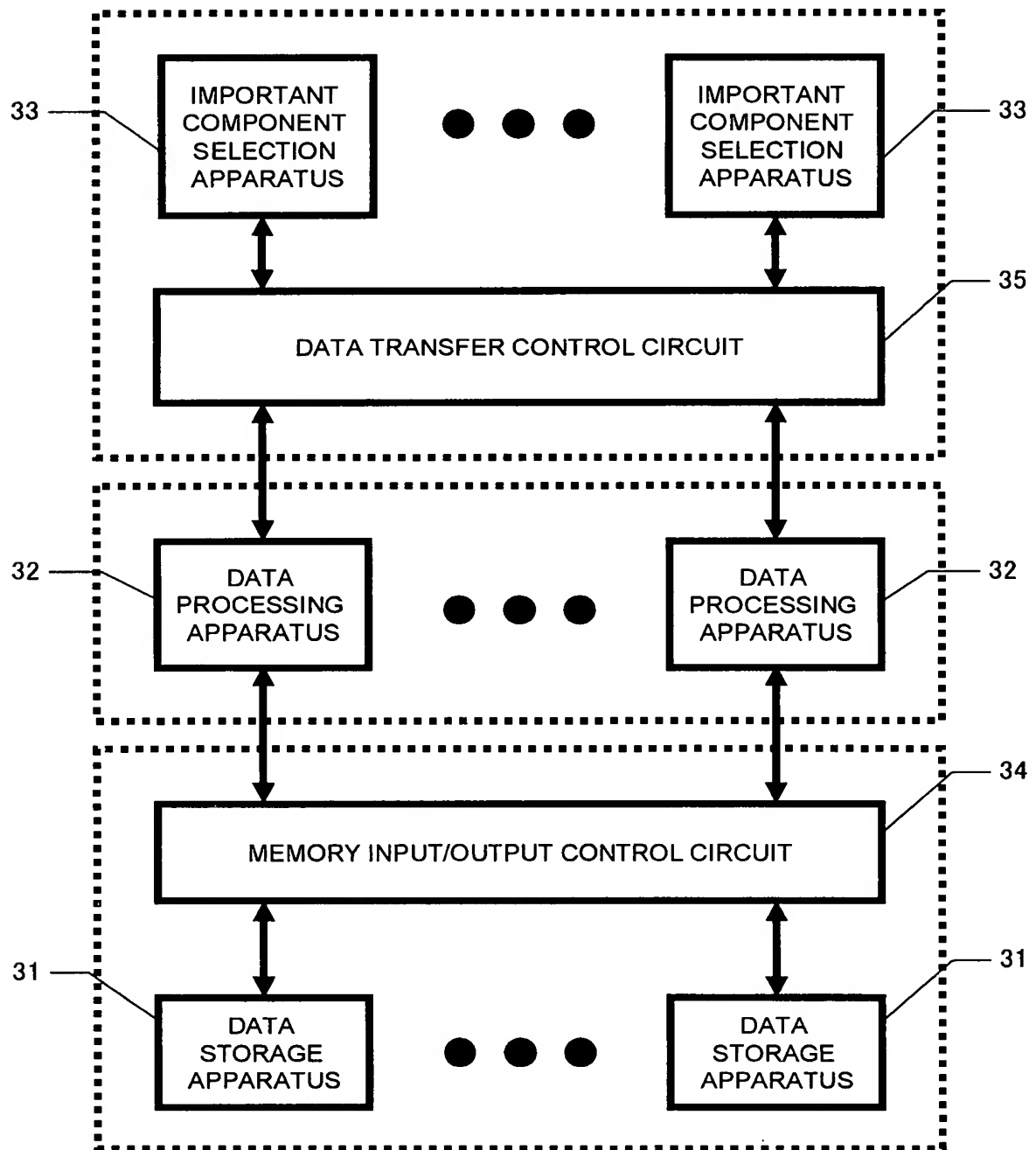


FIG. 6

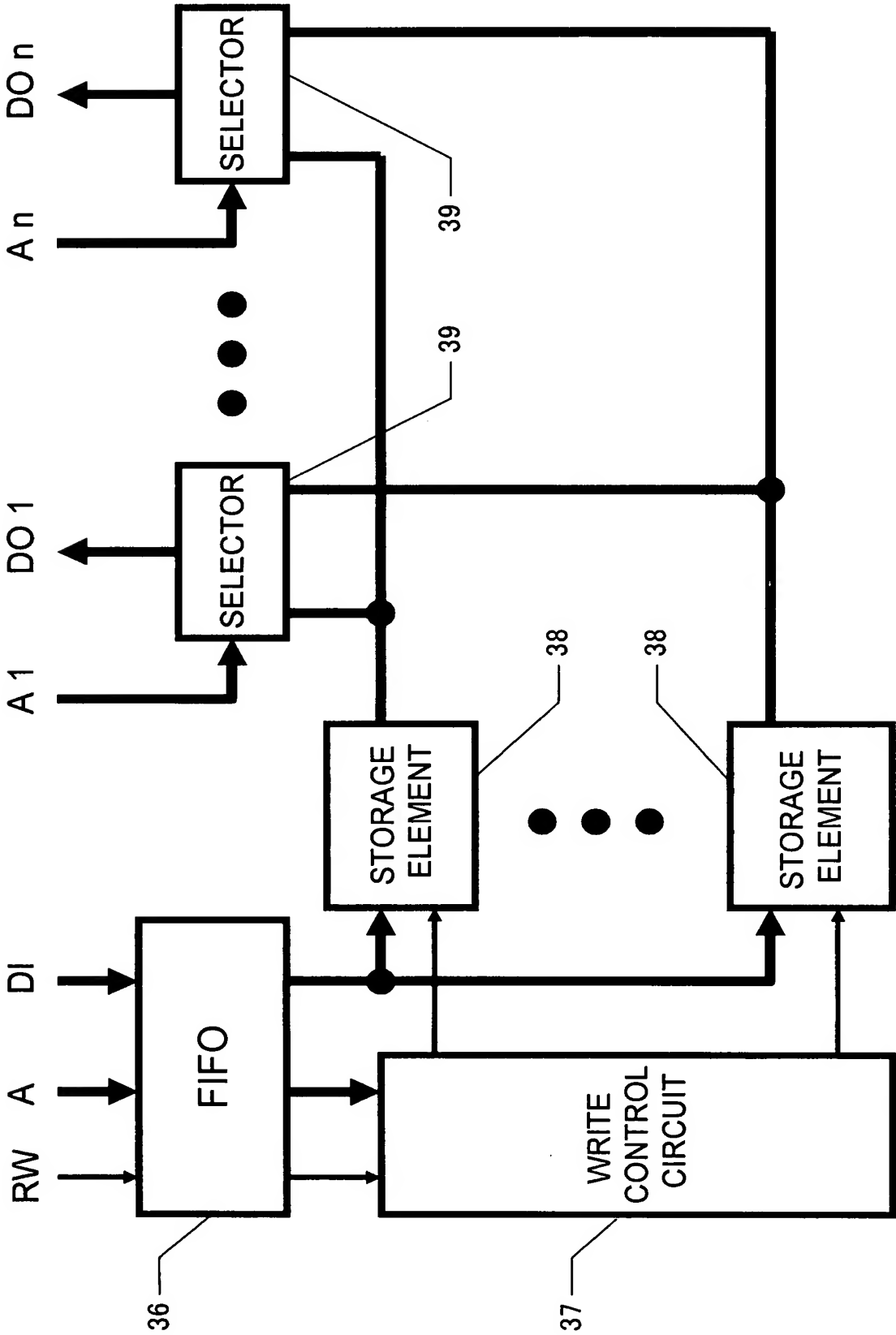


FIG. 7

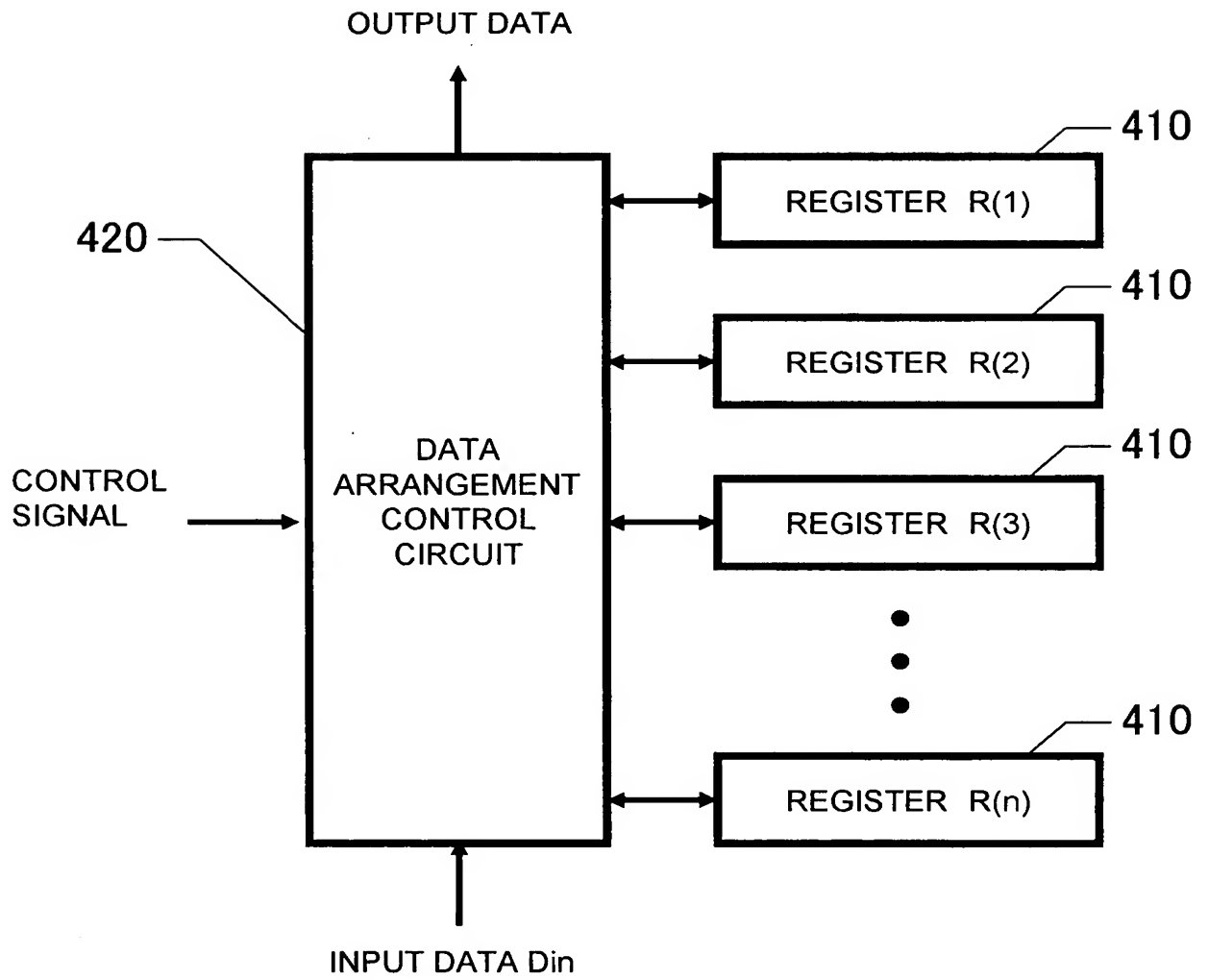


FIG. 8

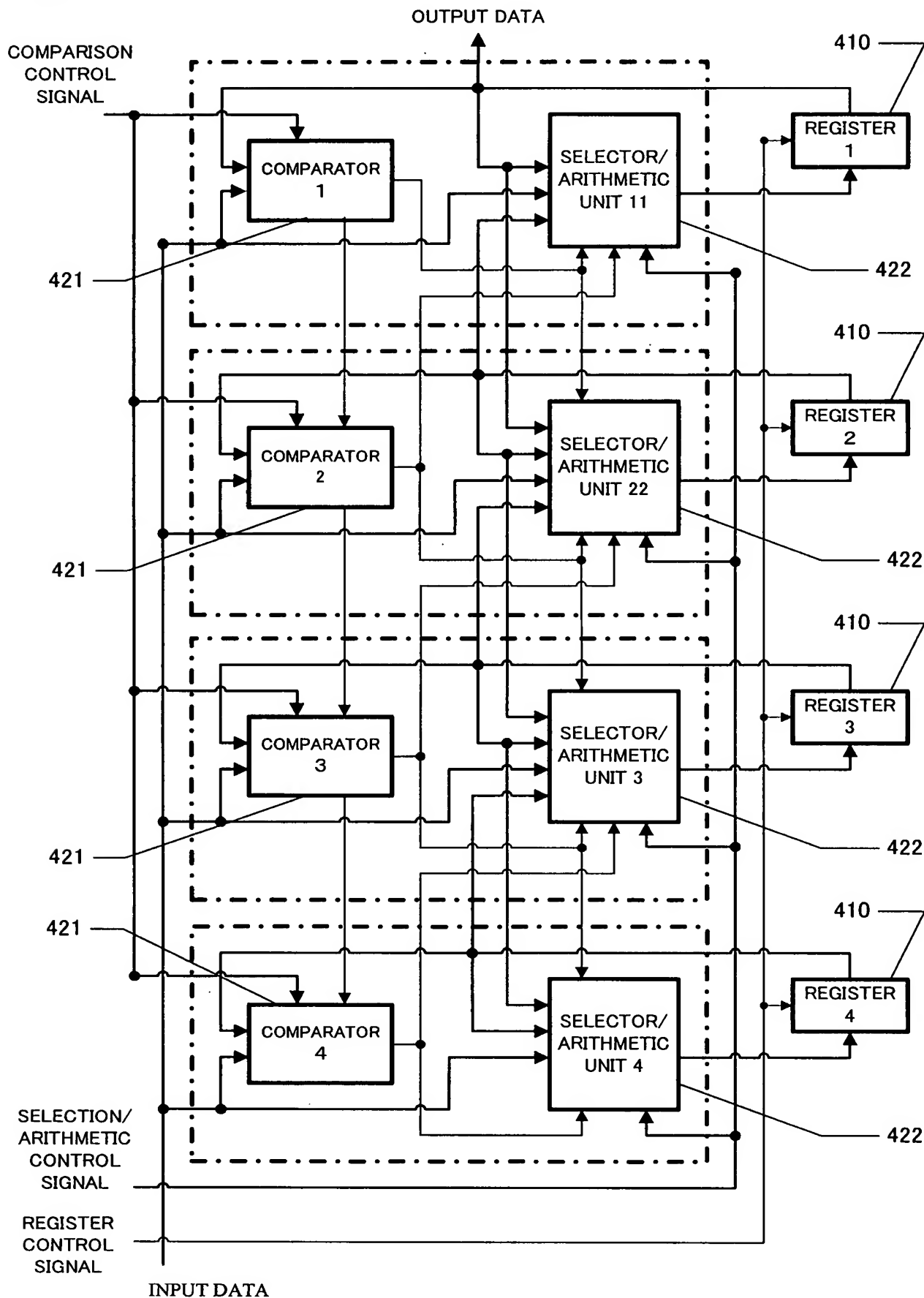


FIG. 9

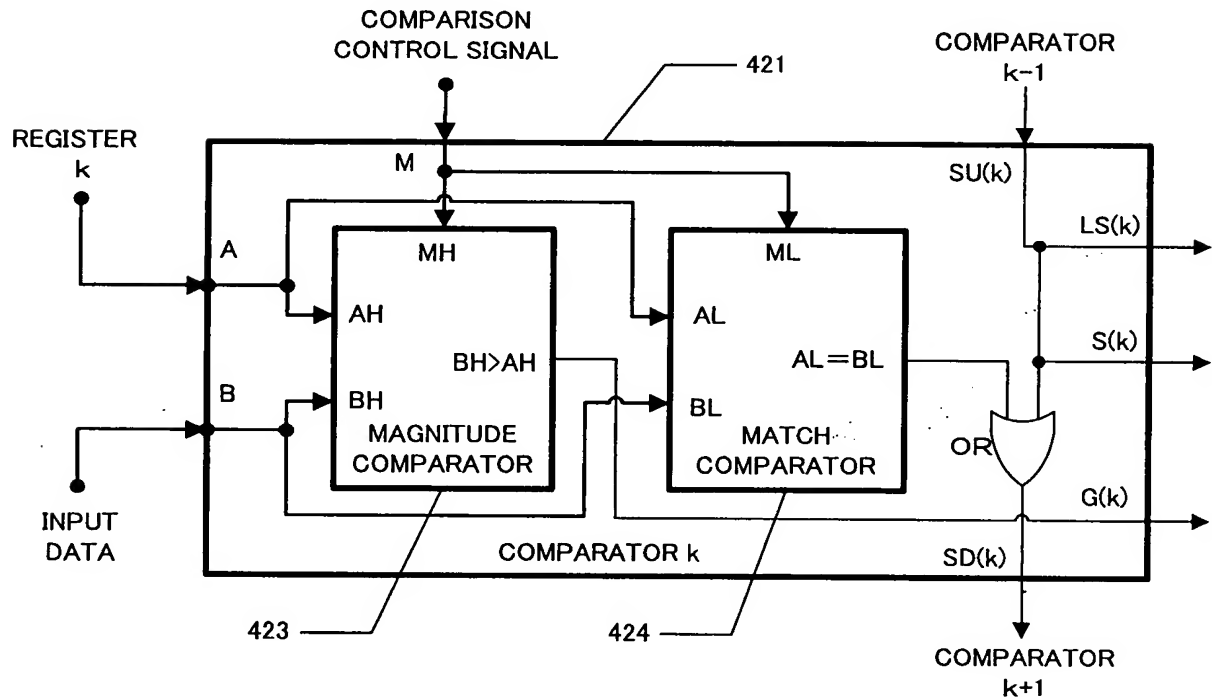


FIG. 10

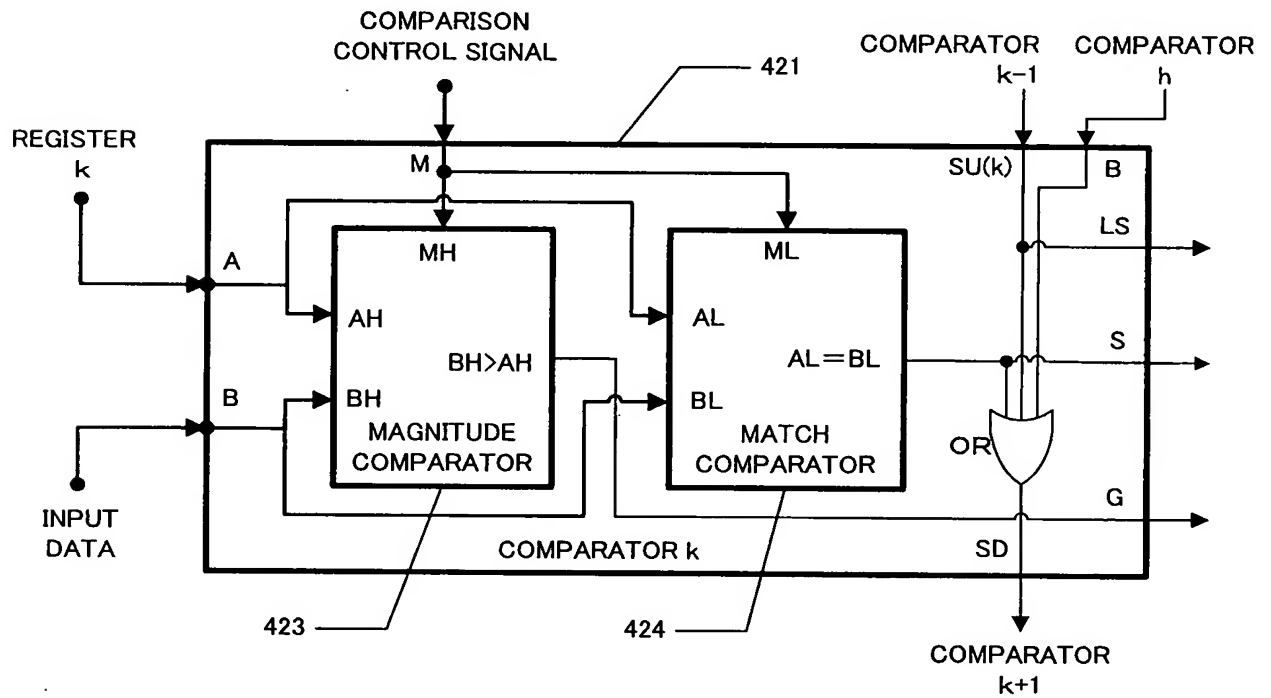


FIG. 11

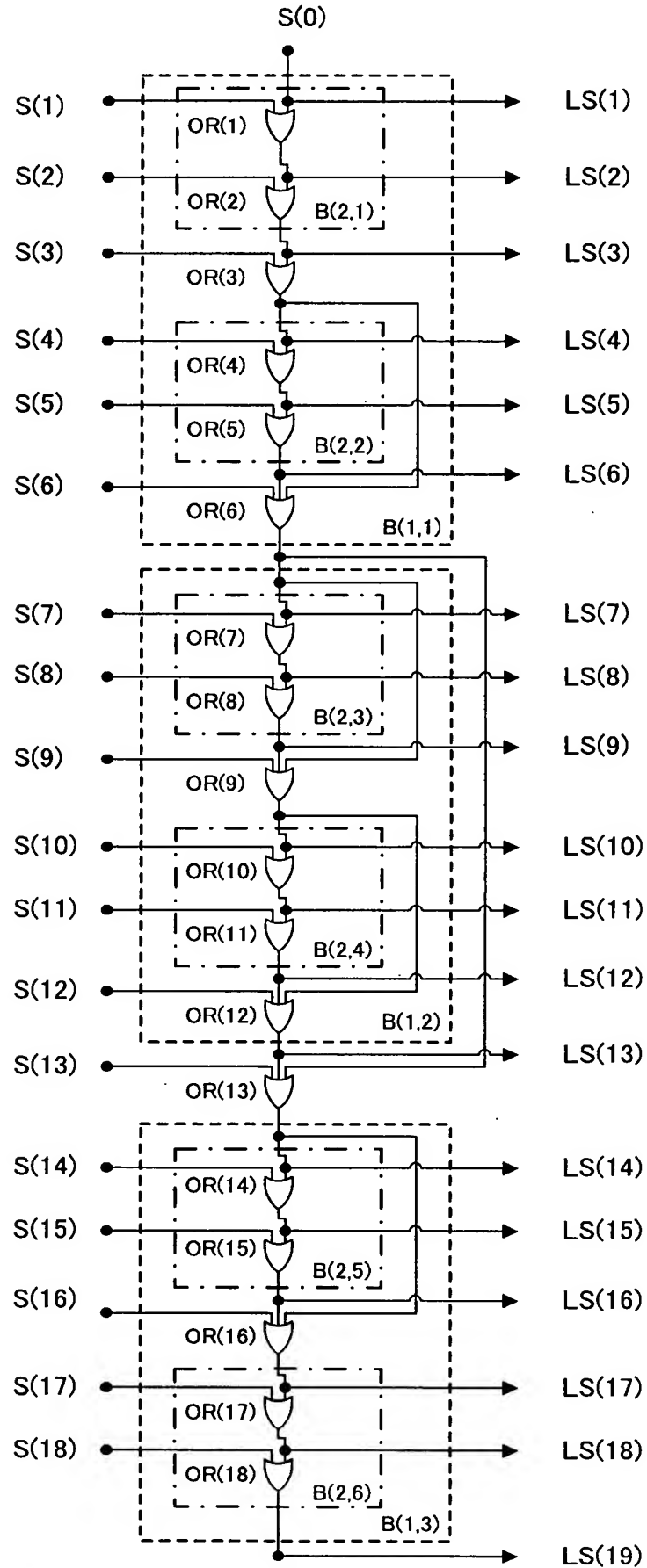


FIG. 12

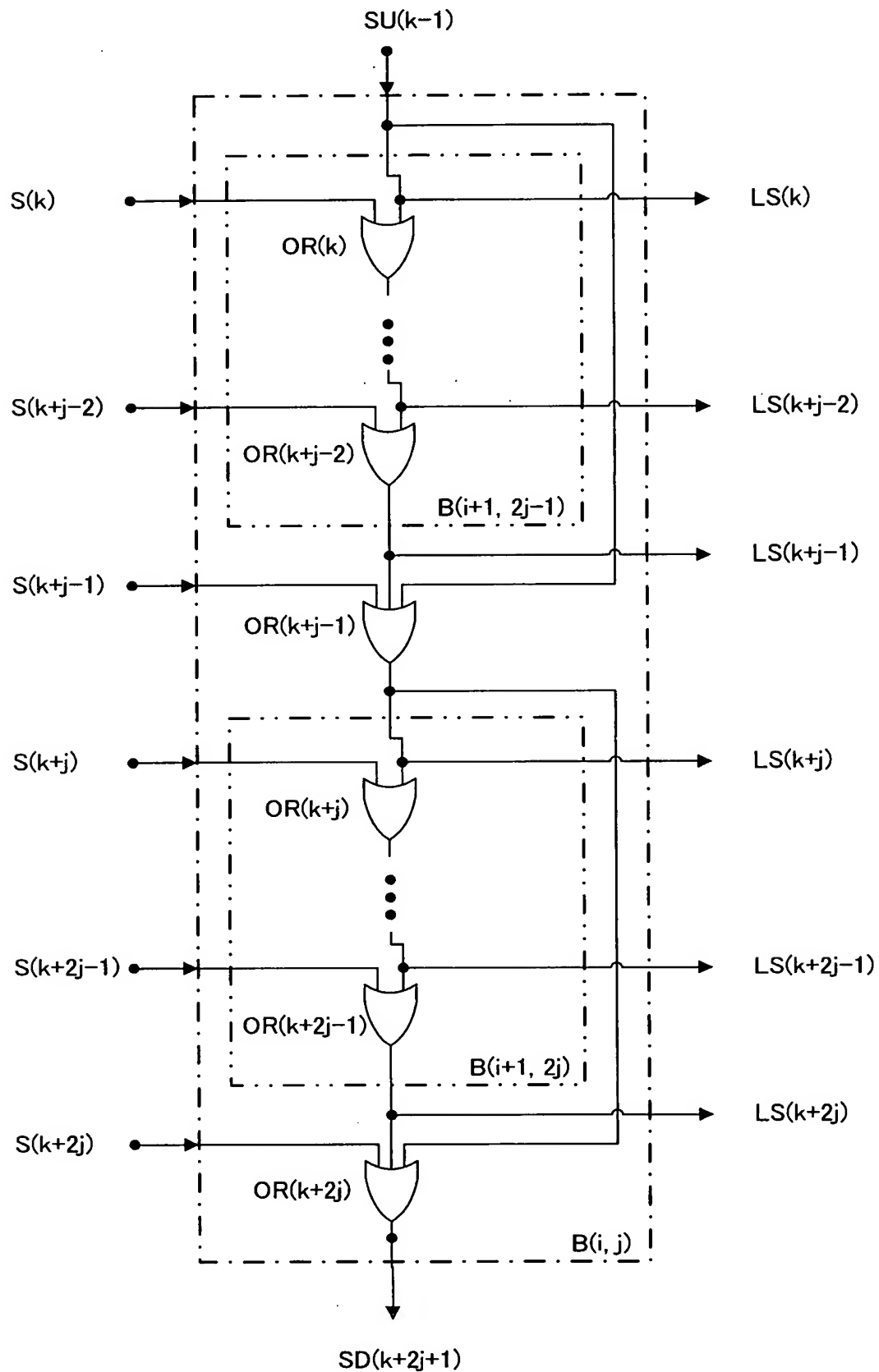


FIG. 13

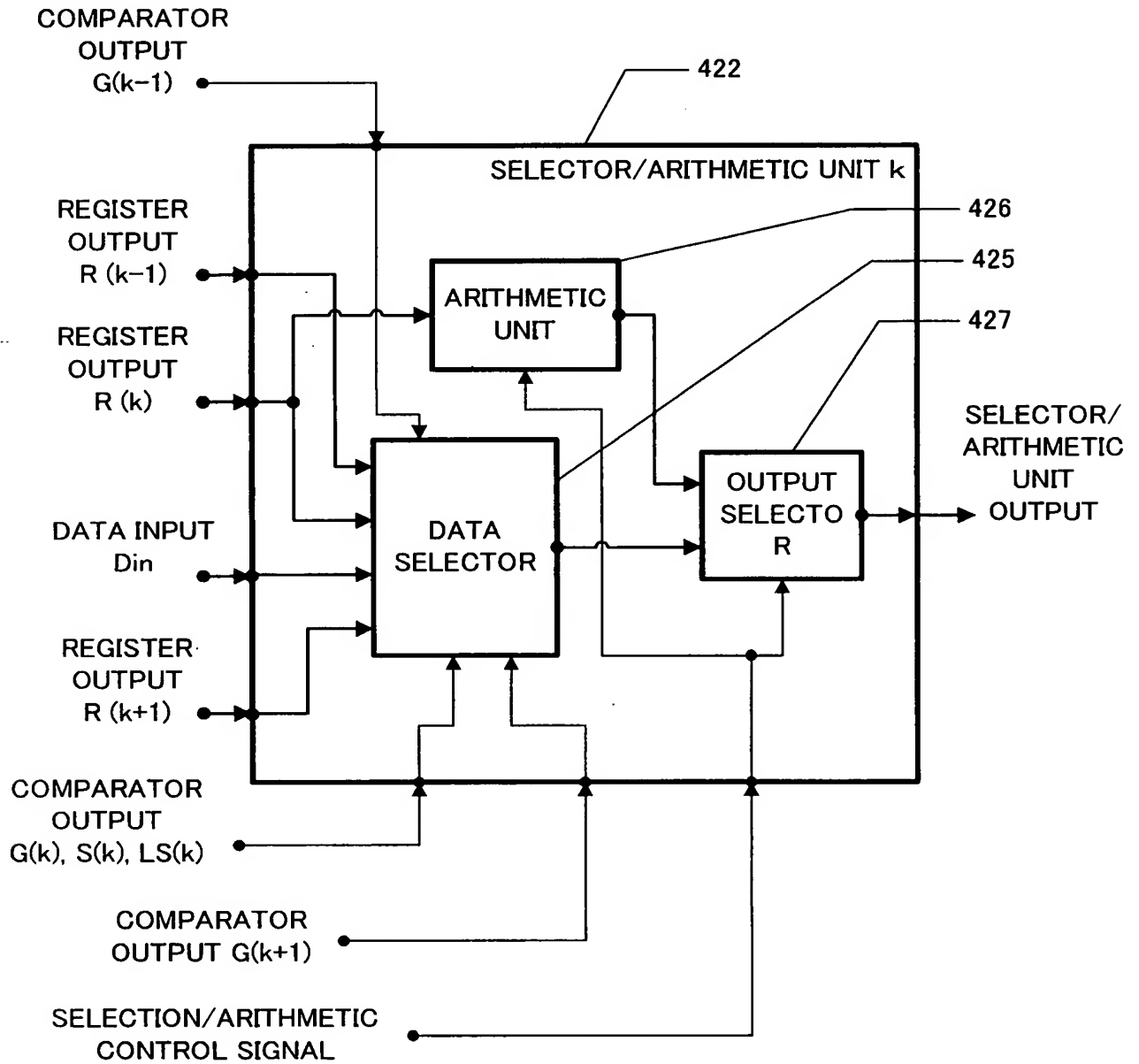


FIG. 14

CONTROL SIGNAL	CONDITIONS		COMPARATOR OUTPUT					SELECTOR/ ARITHMETIC UNIT OUTPUT
	IMPORTANCE	SAME COMPONENT POSITION	G(k-1)	G(k)	G(k+1)	S(k)	LS(k)	
PUSH	$P(k) \geq P_{in}$	*	*	0	*	*	*	R(k)
	$P(k-1) \geq P_{in} > P(k)$	$k \leq K_s$	0	1	*	*	0	Din
	$P_{in} > P(k-1) \geq P(k)$	$k \leq K_s$	1	1	*	*	0	R(k-1)
	*	$k > K_s$	*	*	*	*	1	R(k)
	$P(k) \geq P(k+1) \geq P_{in}$	*	*	0	*	*	*	R(k+1)
POP	$P(k) \geq P_{in} > P(k+1)$	$k < K_s$	*	0	1	0	0	Din
	$P_{in} > P(k)$	$k < K_s$	*	1	*	0	0	R(k)
	*	$k = K_s$	*	*	*	1	*	R(k+1)
	*	$k > K_s$	*	*	*	*	1	R(k+1)
	*	*	*	*	*	*	*	$P(k) + a$
SFTL	*	*	*	*	*	*	*	$P(k) < a$
SFTR	*	*	*	*	*	*	*	$P(k) > a$

FIG. 15

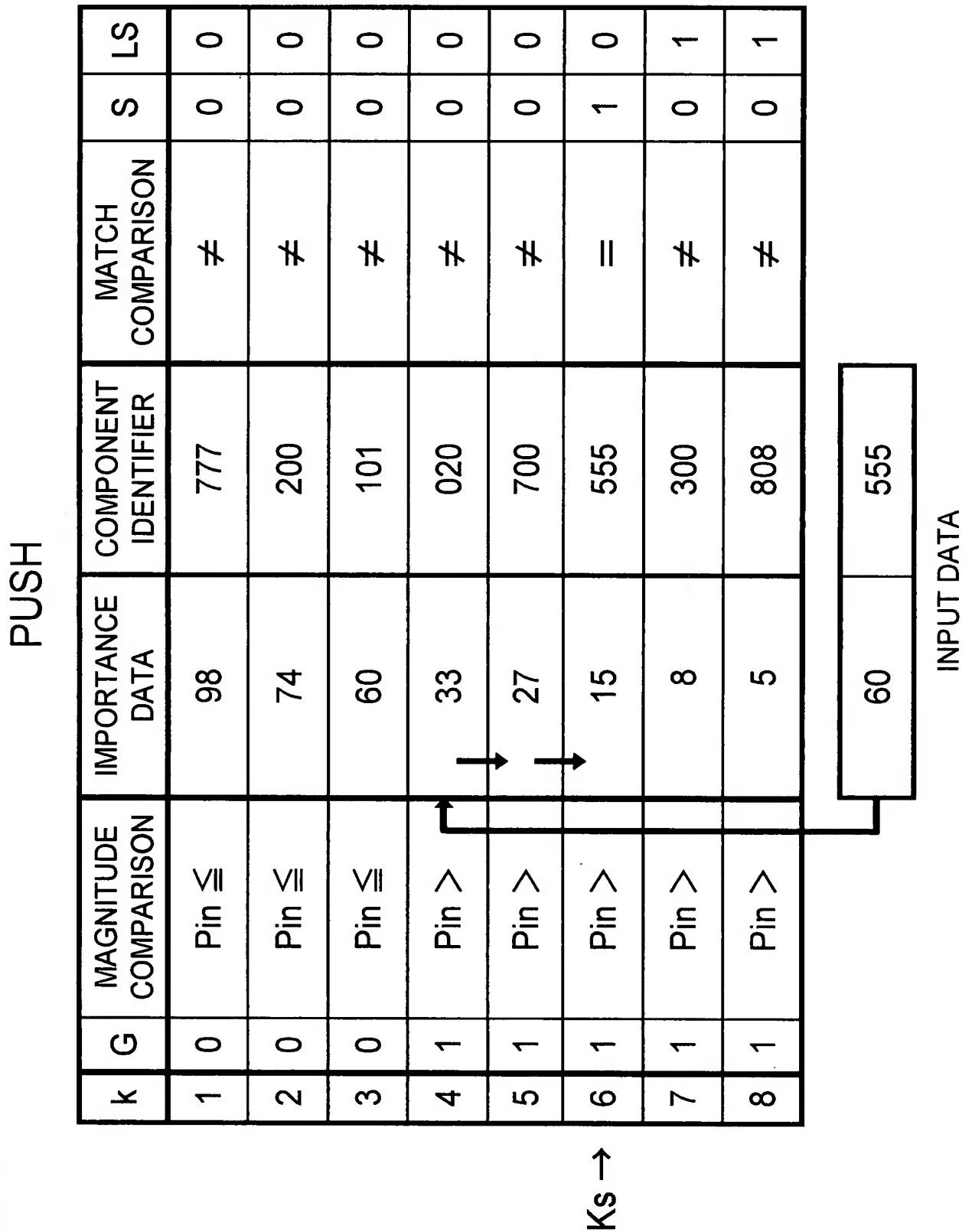


FIG. 16

POP

K	G	MAGNITUDE COMPARISON	IMPORTANCE DATA	COMPONENT IDENTIFIER	MATCH COMPARISON	S	LS
1	0	$P_{in} \leq$	98 ↑	777	\neq	0	0
2	0	$P_{in} \leq$	74 ↑	200	\neq	0	0
3	0	$P_{in} \leq$	60 ↑	101	\neq	0	0
4	1	$P_{in} >$	33	020	\neq	0	0
5	1	$P_{in} >$	27	700	\neq	0	0
6	1	$P_{in} >$	15 ↑	555	$=$	1	0
7	1	$P_{in} >$	8 ↑	300	\neq	0	1
8	1	$P_{in} >$	5 ↑	808	\neq	0	1
			0	0			
			60	555			

Ks →

INPUT DATA

FIG. 17

POP							
k	G	MAGNITUDE COMPARISON	IMPORTANCE DATA	COMPONENT IDENTIFIER	MATCH COMPARISON	S	LS
1	0	$P_{in} \leq$	98 ↑	777	\neq	0	0
2	0	$P_{in} \leq$	74 ↑	200	\neq	0	0
3	0	$P_{in} \leq$	60 ↑	101	\neq	0	0
4	0	$P_{in} \leq$	33 ↑	020	\neq	0	0
5	0	$P_{in} \leq$	27 ↑	700	\neq	0	0
6	0	$P_{in} \leq$	15 ↑	555	$=$	1	0
7	0	$P_{in} \leq$	8 ↑	300	\neq	0	1
8	1	$P_{in} >$	5 ↑	808	\neq	0	1
			0 ↑	0			

$K_s \rightarrow$

7	555
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FIG. 18

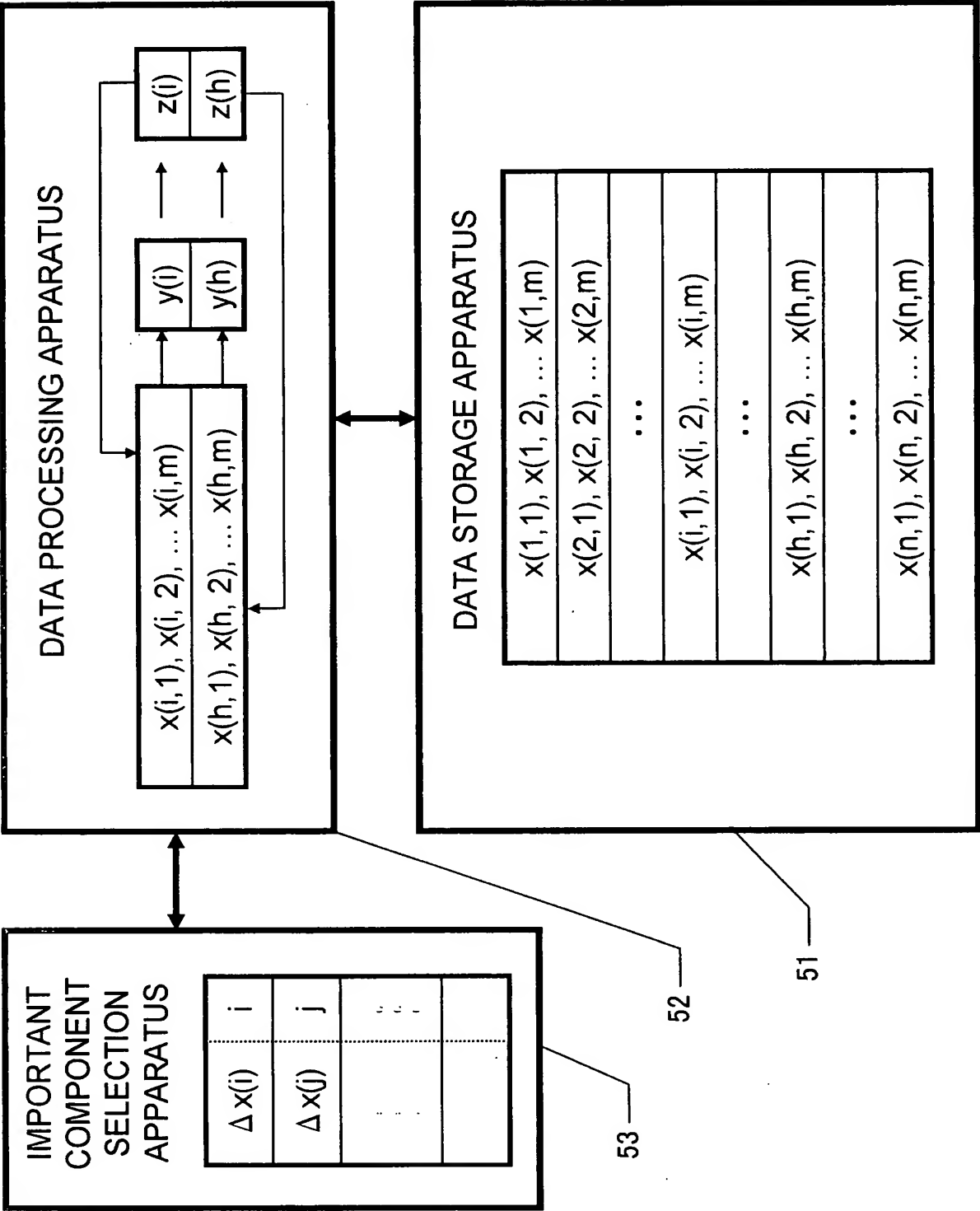


FIG. 19

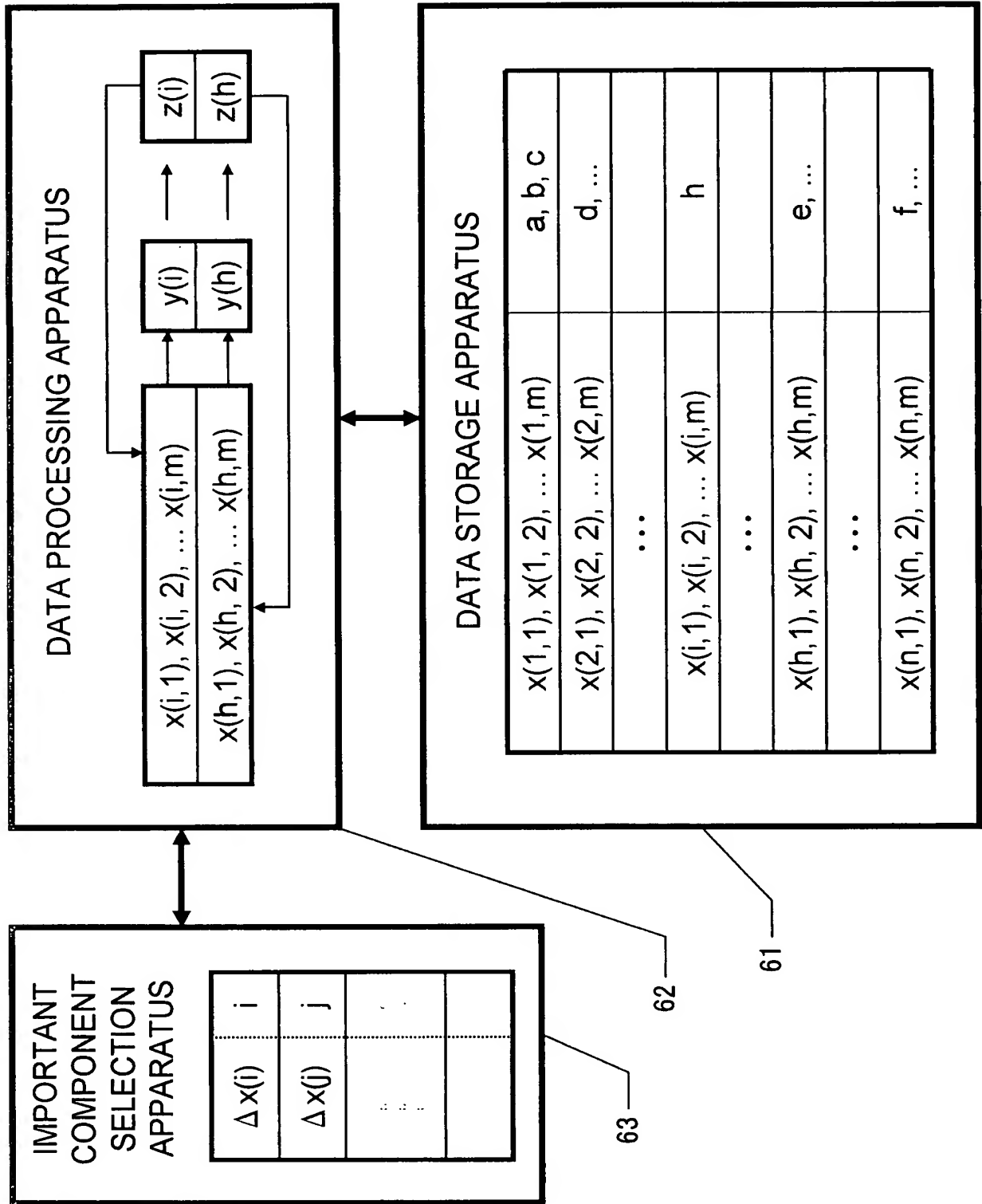
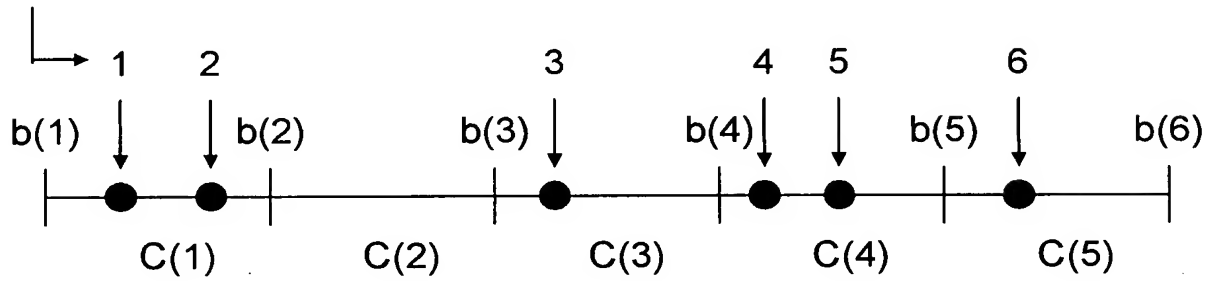


FIG. 20

COMPONENT NUMBER



$$C1=\{1, 2\}, C2=\{\}, C3 = \{3\}, C4 = \{4,5\}, C5 = \{6\}$$

$$i \in C(j) \text{ for } b(j) \leq Y_i < b(j+1)$$